

[APPARATUS AND METHODS FOR PRESSURE COMPENSATED CONTACT WITH THE BOREHOLE WALL]

Abstract

A well logging tool includes a housing; at least one piston moveably disposed on the housing; at least one sensor disposed on the at least one piston; a pressure compensation system coupled to the at least one piston such that a pressure at a back side of the at least one piston is substantially identical to a pressure outside the well logging tool; and a piston deployment mechanism for deploying the at least one piston. A method for well logging using a logging tool having at least one piston and a pressure compensating system, wherein the at least one piston includes at least one sensor, the method includes disposing the well logging tool in a borehole; deploying the at least one piston to establish a contact between the at least one piston and a wall of the borehole; and measuring a formation property using the at least one sensor.